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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,630	09/27/2006	Lori Henderson	10536.204-US	7222

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EXAMINER	
GOUGH, TIFFANY MAUREEN	
ART UNIT	PAPER NUMBER
1657	

NOTIFICATION DATE	DELIVERY MODE
11/30/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Patents-US-NY@novozymes.com

Office Action Summary	Application No.	Applicant(s)	
	10/588,630	HENDERSON ET AL.	
	Examiner	Art Unit	
	TIFFANY M. GOUGH	1657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 July 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4,11-15,17,20-22,24-26,31,33,34,37,38 and 41-44* is/are pending in the application.

4a) Of the above claim(s) *17,20-22,24-26,31,33,34,38 and 42-44* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4,11-15 and 41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/10/09*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Applicant's response filed 7/6/2009 has been received and entered into the case. IDS filed 7/10/2009 has been entered and considered. All amendments and arguments have been considered. Claims 1, 4, 11-15, 17, 20-22, 24-26, 31, 33, 34, 37, 38, 40-44 are pending. Claims 17, 20-22, 24-26, 31, 33, 34, 37, 38, 40, 42-44 are withdrawn by applicant as being directed to a non-elected invention. Claims 1, 4, 11-15 and 41 have been considered on the merits herein.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The previous 112 2nd rejection of record over claim 42 has been withdrawn in light of applicant claim amendment.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1,4, 11-15,41 are rejected under 35 U.S.C. 102(e) as being anticipated by Grichko (2004/0253696).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Grichko teaches a process for liquefying starch-containing material comprising treating with at least one alpha-amylase and a maltogenic amylase which has been reduced in size by milling. Grichko also teaches the liquefaction process to be carried out as a multi-step process within the temperature ranges of 80-105°C then 65-95°C and finally between 40-75°C. The starch material is also treated with an esterase such as lipase and phospholipase. The process is also carried out in the presence of a fatty acid oxidizing enzyme such as lipoxygenase (0008,0009,0012,0022,0023,0025,0039-0063,0085-0098,0109-0112).

Thus, the reference anticipates the claimed subject matter.

Claims 1, 4, 12, 13, 41 are rejected under 35 U.S.C. 102(b) as being anticipated by each of Veit et al. (WO 02/38787 A2) and Olsen et al. (WO 02/074895 A2).

Veit and Olsen teach a process for liquefying starch-containing material comprising treating with at least one alpha-amylase and a maltogenic amylase which has been reduced in size by milling. They also teaches the liquefaction process to be carried out as a multi-step process within the temperature ranges of 80-105°C then 65-95°C and finally between 40-75°C (see Veit p.3-6,p.9,lines 30-p.14 and Olsen p.4,lines 20-35, p.5, lines 1-9, p.12,lines 4-11,p.13, lines 28-p.14).

Thus, the reference anticipates the claimed subject matter.

Response to Arguments

Applicant's arguments filed 7/6/2009 have been fully considered but they are not persuasive. Applicant argues that while Grichko, Viet and Olsen teaches temperature ranges within applicants claimed range a case by case determination must be made as to anticipation and what constitutes a "sufficient specificity." Applicant argues that the prior art does not teach sufficient specificity.

It is the examiner's position that Applicants claim is drawn to a liquefaction process wherein it is carried out in three stages within claimed temperature ranges. The prior art does teach a liquefaction process carried out in three stages within applicants claimed temperature ranges. The rejections are maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 4, 11-15, 41 are rejected under 35 U.S.C. 103(a) as being obvious over the combination of each of Veit et al. (WO 02/38787 A2) and Olsen et al. (WO 02/074895 A2) in view of Grichko (20040253696).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject

matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

As stated above, Veit and Olsen teach a process for liquefying starch-containing material comprising treating with at least one alpha-amylase and a maltogenic amylase which has been reduced in size by milling. They also teaches the liquefaction process to be carried out as a multi-step process within the temperature ranges of 80-105°C then 65-95°C and finally between 40-75°C (see Veit p.3-6,p.9,lines 30-p.14 and Olsen p.4,lines 20-35, p.5, lines 1-9, p.12,lines 4-11,p.13, lines 28-p.14).

The above references do not teach using an esterase and a fatty acid oxidizing enzyme.

Grichko teaches a process for liquefying starch-containing material comprising treating with at least one alpha-amylase and a maltogenic amylase which has been reduced in size by milling. Grichko also teaches the liquefaction process to be carried out as a multi-step process within the temperature ranges of 80-105°C then 65-95°C and finally between 40-75°C. The starch material is also treated with an esterase such as lipase and phospholipase. The process is also carried out in the presence of a fatty

acid oxidizing enzyme such as lipoxygenase (0008,0009,0012,0022,0023,0025,0039-0063,0085-0098,0109-0112).

At the time of the claimed invention, it would have been obvious to one of ordinary skill in the art to have used such enzymes in a liquefaction process because they are known in the art to be used in such processes believed to add increased benefit. Grichko teaches a fatty acid oxidizing enzyme to be useful as it increases starch release and improves stability.

Moreover, at the time of the claimed invention, one of ordinary skill in the art would have been motivated to have used such enzymes with a reasonable expectation for successfully carrying out a liquefaction process such as those taught by Olsen and Viet because the enzymes are known in the art to have added benefits. For example, Grichko teaches a fatty acid oxidizing enzyme to be useful as it increases starch release and improves stability.

Response to Arguments

Applicant's arguments filed 7/6/2009 have been fully considered but they are not persuasive. In response to applicants argument regarding same assignment of Grichko and the instant application, applicant has not fully complied with MPEP section 706.02(1)(2) which clearly addresses the statement required by applicant to overcome such rejection.

Double Patenting

The previous ODP rejection over claims 1,4,11,12,14,15,42 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1,2,5-8,15-17 of copending Application No. 10/459315 is withdrawn in light of '315 being an abandoned application.

Conclusion

NO claims are allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIFFANY M. GOUGH whose telephone number is (571)272-0697. The examiner can normally be reached on M-F 8-5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Majunath Rao can be reached on 571-272-0939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ralph Gitomer/
Primary Examiner, Art Unit 1657

/Tiffany M Gough/
Examiner, Art Unit 1657